REMARKS

Claims 1, 3, 5-10, 15, and 18-23 are currently pending, wherein claims 2, 4, 11-14, 16 and 17 have been canceled and new claims 21-23 have been added. Favorable reconsideration is respectfully requested in view of the remarks presented herein below.

In paragraph 2 of the final Office action ("Action"), the Examiner rejects claims 1-19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,865,227 to Chan ("Chan"). Applicants respectfully traverse this rejection.

In order to support a rejection under §102, the cited reference must teach each and every claimed element/feature. In the present case, Chan fails to anticipate claims 1-19 because Chan fails to disclose each and every claimed element as discussed below.

Independent claim 1, which has been amended to include the subject matter of canceled claim 4, defines a method for approximating a motion vector for an image block. The method includes, *inter alia*, deriving a first set of vectors from motion vectors of neighboring blocks in the same frame and the corresponding block and its neighboring blocks in one or more preceding and/or subsequent frames; deriving a set of candidate vectors from one or more motion vectors of neighboring blocks in the same frame and the corresponding block and its neighboring blocks in one or more preceding and/or subsequent frames; deriving an estimated motion vector from the first set of vectors; comparing the candidate vectors with the estimated motion vector; and selecting one of the candidate vectors on the basis of its similarity of motion to said estimated vector.

Chan fails to anticipate the method of claim 1 for at least the reason that Chan fails to disclose or suggest selecting one of the candidate vectors on the basis of its similarity of motion to said estimated vector as claimed.

Chan discloses a method for concealing errors in video data. The method includes, *inter alia*, decoding a first *set* of K motion vectors; estimating a second *set* of motion vectors corresponding to a number N-K of motion vectors (N being the total number of macroblocks in the packet and K being the point at which a corrupt motion

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vector was detected in the packet); combining the set of decoded motion vectors and the set of estimated motion vectors to create a candidate *set* of motion vectors. The candidate set is then used to perform motion compensated temporal replacement of the texture data and is then evaluated under an "image smoothness" test (see column 3, lines 50 to 63). This process is repeated N-K times. Then the candidate motion vector *set* with the best smoothness measure is selected to replace the corrupted motion vectors (see column 4, lines 28 to 30). Although, Chan discloses creating a set of decoded motion vectors, a set of estimated motion vectors, and arguable a set of candidate motion vectors, nowhere in Chan is there any disclosure or suggestion of selecting one of the candidate vectors on the basis of its similarity of motion to said estimated vector as claimed.

The Examiner points to the motion compensated temporal replacement block 506 of Fig. 5 as anticipating the claimed step of selecting one of the candidate vectors on the basis of similarity to said estimated vector. The Examiner's assertion is unfounded for the following reason.

Even if one were to interpret the motion vector sets of Chan to be equivalent to the claimed first and candidate vector sets, nowhere in Chan is there any disclosure of comparing the candidate vectors with the estimated motion vector; and selecting one of the candidate vectors on the basis of its similarity of motion to said estimated vector. To the contrary, Chan only discloses comparing a smoothness values produced using a set of candidate vectors, which is not equivalent to comparing the motion vectors themselves to determine similarity in *motion*.

At best Chan discloses selecting a *set* of motion vectors based on a comparison of smoothness values. Nowhere in Chan is there any disclosure or suggestion of comparing the motion vectors to determine similarity in motion as claimed. Therefore, Chan cannot possibly be interpreted as anticipating claim 1 because Chan fails to disclose each and every claimed element.

Claims 3, 5-10, 15, and 18-20, variously depend from independent claim 1. Therefore, claims 3, 5-10, 15, and 18-20 are not anticipated by Chan for at least those

reasons presented above with respect to claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 3, 5-10, 15, and 18-20 under 35 U.S.C. § 102(e) as anticipated by Chan.

In paragraph 3 of the Action, the Examiner rejects claims 1-7 and 10-14 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6, 700,934 to Lin ("Lin"). Applicants respectfully traverse this rejection.

As discussed above, independent claim 1 defines a method of approximating a motion vector for concealment of a lost or damaged motion vectors. The method includes, *inter alia*, deriving a first set of vectors; deriving a set of candidate vectors; deriving an estimated motion vector from the first set of vectors; comparing the candidate vectors with the estimated motion vector; and selecting one of the candidate vectors on the basis of its similarity of motion to said estimated motion vector. Lin discloses a method for detecting corrupted motion vectors in MPEG bitstream. However, Lin fails to anticipate the method of claim 1 because Lin fails to disclose each and every claimed element. More specifically, Lin fails to disclose comparing the candidate vectors with the estimated motion vector; and selecting one of the candidate vectors on the basis of its similarity of motion to said estimated vector as claimed.

The Examiner asserts that Lin discloses a method as claimed in as much as Lin discloses a method of detecting motion vector errors which includes comparing motion vectors to determine similarity in motion. More specifically, the Examiner points to Fig. 8 of Lin. However, nowhere in Fig. 8 or elsewhere in Lin is there any disclosure of deriving a set of candidate vectors from one or more motion vectors of neighboring blocks in the same frame and the corresponding block and its neighboring blocks in one or more preceding and/or subsequent frames; deriving an estimated motion vector; comparing the candidate vectors with the estimated motion vector; and selecting one of the candidate vectors on the basis of its similarity of motion to said estimated vector as claimed.

Claims 3, 5-7, and 10 variously depend from independent claim 1. Therefore, claims 3, 5-7, and 10 are not anticipated by Lin for at least those reasons presented

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above with respect to claim 1. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 3, 5-7 and 10 under 35 U.S.C. § 102(e) as anticipated by Lin.

In paragraph 5 of the Action, the Examiner rejects claim 20 under 35 U.S.C § 103(a) as being unpatentable over Chan in view of U.S. Patent No. 6,782,053 to Lainema ("Lainema"). Applicant respectfully traverses this rejection.

Claim 20 variously depends from independent claim 1. Therefore, claim 20 is patentable over Chan for at least those reasons presented above with respect to claim 1. Lainema discloses a method of coding video frames in a telecommunication system. However, Lainema fails to overcome the deficiencies of Chan.

Since Chan and Lainema each fail to disclose or suggest a method of approximating a motion vector as recited in claim 1 (see discussion above), the combination of these two references cannot possibly disclose or suggest a method as claimed. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 20 under 35 U.S.C. § 103.

New claims 21-23 define a method of approximating a motion vector for an image block for concealment of a lost or damaged motion vector. The method includes, *inter alia*, deriving a first set of vectors from motion vectors of neighbouring blocks in the same frame; deriving a set of candidate vectors from motion vectors of the corresponding block and its neighbouring blocks in one or more preceding or subsequent frames; determining an overall vector correlation between the vectors of first set and the vectors of the candidate set; and approximating the motion vector from one or more of the motion vectors from the first set or candidate set on the basis of the overall vector correlation. New claims 21-23 are patentable over the prior art of record for at least the reason that the prior art fails to disclose or suggest determining an overall vector correlation between the vectors of first set and the vectors of the

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candidate set; and approximating the motion vector from one or more of the motion vectors from the first set or candidate set on the basis of the overall vector correlation as claimed.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Penny L. Caudle Reg. No. 46,607 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

Dated: June 26, 2008

Respectfully submitted,

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